



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/749,473	12/28/2000	Hiroyuki Ikeda	201376US2	6320

22850 7590 05/26/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

UHLIR, NIKOLAS J

ART UNIT	PAPER NUMBER
----------	--------------

1773

DATE MAILED: 05/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/749,473

Applicant(s)

IKEDA, HIROYUKI

Examiner

Nikolas J. Uhler

Art Unit

1773

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 19 May 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☒ The proposed amendment(s) will not be entered because:
- (a) ☒ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see Note below);
- (c) ☒ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: see attached sheet.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☒ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: none.

Claim(s) objected to: _____.

Claim(s) rejected: 1, 3-14.

Claim(s) withdrawn from consideration: _____.

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____.

Continuation of box 2: The proposed amendments will not be entered because they introduce new issues that require further search and consideration and do not materially simplify the issues for appeal. Specifically, applicant's proposed amendment to insert a limitation requiring "at least 5" soft magnetic layers was not earlier presented. The proposed amendment would create a new combination of limitations that requires further search and consideration to determine patentability. Further, the proposed amendment would create a new issue to be considered and thus does not materially simplify the issues for appeal.

Continuation of box 5: The applicant's request for reconsideration has been fully considered but is not persuasive. The applicant's arguments with respect to limitations contained in the proposed amendment are moot as the proposed amendment has not been entered for the reasons set forth above for box 2.

The applicant also argues that there is no motivation to one of ordinary skill in the art to modify the Sugita reference per the teachings of Hokkyo so as to arrive at the instantly claimed invention. Specifically, the applicant argues that Hokkyo only indicates that surface smoothness of a single thick soft magnetic layer is improved through the use of smoothness control film, and does not indicate that the surface roughness of multiple thin soft magnetic layers will be improved. The examiner agrees that Hokkyo does indeed only recite embodiments where a single thick soft magnetic layer is utilized. However, Hokkyo teaches that by providing a smoothness control layer having excellent surface smoothness, the surface roughness of layers deposited above the smoothness

Art Unit: 1773

control film is improved, which in turn improves the surface smoothness (and thus perpendicular orientation) of the magnetic layer (column 2, lines 1-21). Thus, although Hokkyo does not teach the use of multiple soft magnetic layers, Hokkyo clearly teaches that by providing a smoothness control layer, the surface roughness of multiple layers (in this case the soft magnetic and magnetic layers) deposited on the smoothness control layer is improved. Given this fact, and given the teaching in Hokkyo of the desirability of improving the surface roughness/perpendicular orientation of the magnetic layer, one of ordinary skill in the art at the time the invention was made would have been motivated to make the proposed modification with a reasonable expectation of success.

The applicant then argues that Hokkyo only discloses the improvement of the surface smoothness of soft magnetic layers of FeSiAl or FeTaN, and that Hokkyo does not disclose that the surface roughness of a NiFe layer would be improved. The examiner understands applicant's argument but does not find it to be persuasive. As is clearly shown at column 2, lines 7-21, Hokkyo teaches that the improved surface smoothness of the smoothness control layer improves the surface roughness of both the soft magnetic layer and the magnetic layer. As the soft magnetic layer and the magnetic layer are compositionally different, it is evident that the improvement in surface roughness is not dependant on the material used to form the soft magnetic layer.

The applicant then argues that Hokkyo teaches away from using NiFe as an underlayer. This argument is unpersuasive, as Sugita clearly teaches the use of a NiFe

Art Unit: 1773

soft magnetic layer. no modification was ever asserted by the examiner to change the composition of the soft magnetic layer utilized by Sugita.

Applicant's remaining arguments are moot because they are drawn to the non-entered amendment.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikolas J. Uhlir whose telephone number is 571-272-1517. The examiner can normally be reached on Mon-Fri 7:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J. Thibodeau can be reached on 571-272-1516. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NJU
nju

Paul Thibodeau
Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700